REPORT NO. 1

Cotton Fiber and Processing Test Results

CROP of 1977

Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
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This is the first of a series of reports of fiber and processing test results from the 1977 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, Crop of 1976", June 1977. These reports are published by the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, Memphis, Tennessee.

Changes or additions to mailing lists should be sent to:

Head, Standardization Section
Cotton Division, AMS, USDA
4841 Summer Avenue
Memphis, Tennessee 38122

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Cotton Division

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1977

Procedures

The Cotton Division, AMS, has made fiber and processing tests each year on the principal varieties of cotton grown by selected cotton improvement groups in the United States since the 1946 crop. Results of these tests have been published in periodic reports throughout the harvesting season and in a summary report at the end of each crop year.1/

Cotton fiber and processing test results will be published this season for approximately 150 production areas in the Cotton Belt of the United States. Individual gins are selected in each classing office territory to represent the major varieties produced in commercial quantities. Each selected gin represents an area producing from 10,000 to 150,000 bales annually, and selections are made on a varietal basis. Where possible, no gin selection was made where less than 70 percent of a given variety was planted in the area. However, where commercial production warranted and no gin location with 70 percent of the variety was available, classing offices were allowed to select lots from individual farms to represent the variety. Pure variety gins were selected when available, regardless of production providing the variety was being commercially grown. Test lots are collected at approximately 3-week intervals. Usually 2 to 4 samplings are received from each gin during the harvest season.

Each spinning test lot consists of several classer's samples of commercially grown cotton of the same grade and staple length from bales grown in the selected area and harvested at essentially the same time. These lots represent the modal quality of the cotton from the gin at the time the samples are classed. Qualities other than those reported are also available in each area due to normal variations in weather and soil condition, cultural, harvesting and ginning practices.

Fiber and processing test results for the 1977 crop are reported in four staple length groups similar to those used in recent years. The test lots to be included in each group are selected on the basis of normal staple length of the varieties.

1/ Cotton Fiber and Processing Test Results, Crop of 1976; Report No 1, dated August 27, 1976, through Report No 11, dated January 28, 1977.

Type test and group number	Staple length group	Carding rate in lbs/hr.	Yarn numbers spun	Twist multiplier used
Carded only:				
I	Short	12-1/2	8s and 22s	4.40
II	Medium	9-1/2	22s and 50s	4.00
Carded and combed:				
III	Long	6-1/2	22s and 50s	3.80
Combed only:				
IV	Extra Long	4-1/2	50s and 80s	3.60

Discussion of Test Results

Medium staple cottons tested through September 16, from the South Texas area show approximately the same fiber characteristics for length, uniformity and fineness as a year ago, according to the Cotton Division, Agricultural Marketing Service, USDA. Samples tested are stronger at zero gage fiber strength tests. Picker and card waste is lower than a year earlier. Yarns spun from these samples are slightly stronger and have fewer imperfections than a year ago. The average appearance index is lower than last season at this time. The average spinning potential yarn number is higher this year.

Table 1.--Cotton: Averages of fiber and processing tests from selected gin points in the United States through September 16, 1977 1/

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results				
		Fibrograph		Mike fineness	Fiber strength		S A nonlint	P & C waste	Yarn quality			Spin. Potent.
		2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Skein str.	Appearance	Imperfections	
	No.	Inches	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	Yarn No.
									22s Carded Yarn			
Short Staple:												
Southwest												
1976	-	-	-	-	-	-	-	-	-	-	-	-
1977	4	.98	45	3.8	91	22	3.3	5.2	102	105	11	48
Medium Staple:												
South Central												
1976	-	-	-	-	-	-	-	-	-	-	-	-
1977	2	1.10	46	4.4	90	23	2.6	5.2	110	95	16	64
Southwest												
1976	19	1.06	46	4.2	81	22	3.1	6.0	105	101	18	58
1977	19	1.06	46	4.2	83	22	3.3	5.5	108	94	15	62
Significant difference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Carded Yarns								
			Digital Fibrograph		Mike	Fiber Strength		Elon-gat'n 1/8"	S.A. Non-lint	Color Raw Stock		P & C	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Potential
No	Grade Name & Code	Stple	2.5% span	Unif		Zero Gage	1/8" Gage			Gra	Yel	Waste	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	8s or 74 tx	22s or 27 tx	
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTHWEST AREA																					
CENTRAL TEXAS																					
	BRANDON							LANKART 611						100 PERCENT							
1	SLM LT SP	42	31	0.91	44	3.9	95	23	5.7	3.2	3	4	4.9	293	94	7.4	6.1	120	110	18	8	37
	DILLEY							TAMCOT SP21						80 PERCENT							
1	SLM	41	34	1.05	44	3.3	86	23	5.4	3.8	0	4	4.8	311	110	7.8	6.9	120	90	47	16	62
	LOTT							LANKART 57						95 PERCENT							
1	MID	31	31	0.95	46	4.0	89	20	5.6	3.1	1	4	5.8	293	96	7.4	6.0	120	100	24	13	42
	WACO							LANKART LX571						100 PERCENT							
1	MID LT SP	32	32	0.99	46	4.0	95	22	5.1	3.2	2	5	5.4	300	109	6.7	6.1	130	120	15	7	53

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Carded Yarns								
			Digital Fibrograph			Fiber Strength		Elon-gat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Poten-tial
No	Grade Name & Code	Stple	2.5% span	Unif.	Mike	Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
SOUTH CENTRAL AREA																					
ARKANSAS																					
KEISER							NEW REX						100 PERCENT								
1	SLM LT SP	42	35	1.08	46	4.2	85	20	5.8	2.4	2	4	5.4	98	33	5.8	4.3	100	90	15	12	58
MISSISSIPPI																					
GUNNISON							DELTAPINE 61						100 PERCENT								
1	SLM	41	35	1.11	47	4.6	94	26	6.0	2.9	1	3	5.1	121	42	6.5	4.8	90	70	18	15	70
SOUTHWEST AREA																					
SOUTH TEXAS																					
BROWNSVILLE							TAMCOT SP37						70 PERCENT								
1	SLM	41	34	1.10	44	3.6	80	21	6.3	3.8	1	3	5.3	105	35	6.4	4.6	80	60	21	18	65
2	SLM	41	34	1.08	45	3.7	76	22	6.1	2.5	1	2	5.3	110	37	6.5	4.8	80	70	16	15	63
3	LM	51	34	1.05	45	3.5	86	22	5.2	5.1	2	3	6.8	100	35	5.9	4.5	80	60	28	23	60
GANADO							DELTAPINE 16						90 PERCENT								
1	MID LT SP	32	33	1.08	46	5.0	83	22	5.9	3.6	1	3	5.3	106	34	6.2	4.5	90	70	20	17	60
LOS FRESNOS							STONEVILLE 256						75 PERCENT								
1	SLM	41	34	1.07	48	4.4	88	23	5.3	3.3	1	3	4.8	107	38	5.9	4.6	100	90	12	9	67
2	SLM	41	34	1.04	47	4.4	85	23	5.8	2.6	2	3	6.1	108	37	6.1	4.6	100	90	13	11	63
3	SLM	41	34	1.10	48	4.4	84	21	5.0	3.4	1	3	5.1	114	40	5.9	4.5	100	90	9	8	69
SAN JUAN							TPSA 1633						74 PERCENT								
1	SLM	41	34	1.08	46	4.0	82	22	5.7	2.7	1	3	5.3	113	38	6.0	4.5	100	80	12	10	67
2	SLM	41	34	1.07	46	4.1	89	23	5.2	4.6	1	3	5.7	111	38	6.0	4.6	110	70	12	9	64
3	SLM	41	34	1.08	47	4.4	84	22	5.3	4.6	2	3	6.5	109	38	6.0	4.4	90	70	15	13	61
SANTA ROSA							STONEVILLE 213						90 PERCENT								
1	MID	31	33	1.01	48	4.8	84	22	5.4	2.6	0	3	5.6	104	34	5.8	4.2	100	90	11	9	58
2	SLM	41	34	1.04	48	4.7	78	22	5.6	2.0	1	3	5.8	108	38	6.3	4.6	100	80	12	11	59
3	SLM	41	34	1.05	49	4.5	79	21	5.8	3.2	1	2	5.5	108	36	6.1	4.4	100	100	9	9	62
SEBASTIAN							STONEVILLE 213						97 PERCENT								
1	SLM PLUS	40	33	1.04	48	4.7	82	23	5.8	2.3	1	4	4.2	111	38	5.2	4.5	100	80	13	9	65
2	SLM PLUS	40	33	1.05	47	4.4	80	22	6.1	3.7	1	3	4.4	105	35	6.8	4.8	90	80	14	11	57
SINTON							TAMCOT SP37						93 PERCENT								
1	MID	31	34	1.07	44	3.5	79	22	6.2	2.3	0	3	5.3	112	38	7.0	5.0	90	70	18	16	64
2	MID	31	34	1.06	45	3.7	82	22	5.9	3.4	0	2	5.3	107	35	6.4	4.8	90	60	16	13	58
3	MID	31	33	1.04	45	3.7	88	21	5.9	3.1	0	2	5.2	103	34	6.3	4.5	90	60	16	11	57

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1977--(Continued)

Production Area, Classification & Sample Number			Fiber Test Results									Processing Test Results - Carded Yarns								
			Digital Fibrograph			Fiber Strength		Elongat'n 1/8"	S.A. Non-Lint	Color Raw Stock		P & C Waste	Strength		Elongation		Appearance Index		Imprfect'ns		Spin. Potential
No	Grade Name & Code	Stple	2.5% span	Unif.	Mike	Zero Gage	1/8" Gage			Gra	Yel		22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	22s or 27 tx	50s or 12 tx	
		32s	In	Pct	Rdg	Mpsi	G/tex	Pct	Pct	No	No	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	No
CENTRAL TEXAS																					
BATESVILLE							STONEVILLE 213						90 PERCENT								
1	MID	31	34	1.07	45	4.2	87	23	5.9	4.5	0	4	6.2 1/	108	37	5.9	4.6	90	70	18	14	59

1/ Cotton stuck to processing rolls